IEEE P802.11
Wireless LANs

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| Proposed Text for TGai Specification Framework on active scanning enhancement |
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Abstract

This document proposes Text for TGai Specification Framwork on active scanning enhancement for Fast AP Discovery.

Proposed specification framework text in this document is from the following three accompanying documents:

* 11-12-0263r0 Spec Framework Proposal: Selection of the AP for Scanning
* 11-12-0264r0 Spec Framework Proposal: Probe Response frame transmission interval
* 11-12-0265r0 Spec Framework Proposal: Selective transmission of the Probe Response

The above documents contain exactly the same text proposal for TGai Specification Framework, and they also contain presentation material and straw poll/motion section for the proposed text. Straw poll/motions on the proposed text in this document will be done with the above three documents.

**Revision notes**

***R2:*** *Initial version accepted by 802.11ai TG*

# Definitions

# Abbreviations and acronyms

# Security Framework

# IP Address Assignment

# Fast Network Discovery

*5.x Active Scanning Enhancements*

*Proposed Text from [12/0263]: Selection of the AP for Scanning*

* STA may include Exclusion List in the Probe Request frame that indicates the APs or STAs that should not transmit probe responses.
* SSID List, BSSID List, MESH ID List, and HESSID List may be included in the Exclusion List to indicate the APs or STAs that should not transmit probe responses.
* Substrings of SSIDs or Mesh IDs can be used in the Exclusion List to indicate the APs or STAs that should not transmit probe responses.
* SubstringInfo field shall be included in the Exclusion List if SSID List or MESH ID List is included to indicate whether substring is used or not.
* The field shall indicate the type of substring used for SSID or Mesh ID in the Exclusion List, for example, “starts with”, “ends with”, or “contains” the substring.

*Proposed Text from [12/0264]: Probe Response frame transmission timeout interval*

* ProbeResponse deadline interval which is the listening duration of the Probe Response shall be included in the Probe Request frame.
* The Responding STA shall not transmit or retransmit Probe Response frame to the transmitter after the time limit specified in the ProbeResponse deadline interval.
* ProbeResponse deadline interval shall be defined as a TIE (Timeout Interval Element).

*Proposed Text from [12/0265]: Selective transmission of the Probe Response*

* STA may include its capability information including security capability in the Probe Request frame. If the capability of the STA cannot fulfill the requirement of the responding STA, then the responding STA shall not transmit Probe Response.
* STA may include its preference information such as request for security processing, or request for no security processing or request for association with HT, VHT, or non-HT STA in the Probe Request frame. If the responding STA cannot fulfill the preference of the requesting STA, then the responding STA shall not transmit Probe Response.
* If the STA that has received the Probe Request cannot accept the requesting STA because of the responding STA’s current condition, such as high load, then the responding STA shall not transmit Probe Response.
* AP Channel Report element included in the most recently received Probe Response may be used to select the next channel to be scanned.

**References:**

[0] IEEE Std 802.11-2012

[1] 11-10/0238: TGai Use Cases

[2] 11-11/0811: TGai Evaluation Methodology

[3] 11-11/0745: TGai Functionl Requirements

[4] 11-12-0263r0 Spec Framework Proposal: Selection of the AP for Scanning

[5] 11-12/0059r1 Selection of the AP for Scanning

[6] 11-12/0060r0 Text for Selection of the AP for Scanning

[7] 11-12-0264r0 Spec Framework Proposal: Probe Response frame transmission interval

[8] 11-12/0061r1 Probe Response frame transmission interval

[9] 11-12/0062r1 Text for Probe Response frame transmission interval

[10] 11-12-0265r0 Spec Framework Proposal: Selective transmission of the Probe Response

[11] 11-12/0063r1 Selective transmission of the Probe Response

[12] 11-12/0064r0 Text for Selective transmission of the Probe Response